U2D8 **Unit #2 Polynomials Review (Algebra Strand)**

Warm Up:

1. ***Expand and simplify***: 4y [3(2x - y) + 5xy] - 6

2. ***Terminology: (Matching)***

Match each term to the correct definition.

a. distributive property
b. polynomial
c. term
d. degree of a term
e. degree of a polynomial
f. variable
g. like terms

____ quantity whose value can change or vary
____ an expression formed by the product of numbers and/or variables
____ an algebraic expression formed by adding or subtracting terms
____ the degree of the highest term
____ terms that have identical variable parts
____ $a\,(x + y) = ax + ay$
____ the sum of the exponents on the variables in a term

3. A ball is dropped from a height of 25 m. The ball's height, H, in metres, after n bounces is represented by the equation $H = 25\left(\frac{1}{2}\right)^n$ What is the height of the ball after 4 bounces? a) $\frac{25}{16}$ m b) $\frac{25}{8}$ m c) $\frac{25}{4}$ m d) $\frac{25}{2}$ m

4. Which is a simplified form of this expression $\frac{x^8(x^6)}{x^4}$ a) x^8 b) x^{10} c) x^{12} d) x^{18}

5. Which of the following is a simplified form of $(-2m + 3) - (5m - 6)$?
a) $3m-3$ b) $3m+9$ c) $-7m-3$ d) $-7m+9$

POLYNOMIAL REVIEW NOTE (ALGEBRA STRAND)

Example 1: Simplify.

a) $(x^2)(x^5)$ b) $\frac{x^3}{x^{-5}}$ c) $(x^3)^5$ d) $(a^3b^5)(a^6b^5)(a^4b)$

e) $\frac{(3ab^2)^3}{(2b^3)^2}$ f) $\frac{(-27x^2y^3)(4x^2y^3)^2}{(2x^3y)^2(9y^2)}$

Example 2: Simplify.

a) $(4n^2 + 2) + (2n^2 - 1)$ b) $(5x^3 + 2x) - (-3x^3 - 4x)$ c) $(5x - 1) + (-3x + 2) - (4x - 8)$

d) $-(2x^2 - 5)$ e) $2x^2(-3x + 4)$ f) $4(3x^2 - x + 6) - (2x^2 + 7x + 2)$

g) $2x(3xy + 2y - 4y^2) - 3(x^2 - 3xy + 2xy^2)$ h) $3(5x - 1) - 2(3x + 5)$

Example 3: On a multiple choice test, 2 mark are given for a correct answer and 1 mark is taken away for an incorrect answer.

a) Use let statements to define your variables

b) Write an algebraic expression to represent how a test is scored.

c) If a student got 16 correct answers and 9 incorrect answer, what was their score?

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